In the Claims:

1. (Currently Amended) A method for consciously synchronizing [[the]] a breathing cycle of a human subject with [[the]] a natural heart rate of the human subject, the method comprising ~~the steps of~~:

[[a)]] monitoring the ~~subject's~~ natural heart rate of the human subject;

detecting a transition in the natural heart rate from a maximum heart rate; [[and]]

providing a first biofeedback signal to the human subject [[when]] to indicate that the ~~subject's~~ natural heart rate has reached [[a]] the maximum heart rate; [[and]]

~~b) monitoring the subject's heart rate~~

detecting a transition in the natural heart rate from a minimum heart rate; and

providing a second biofeedback signal to the human subject [[when]] to indicate that the ~~subject's~~ natural heart rate has reached [[a]] the minimum heart rate.

2. (Canceled)

3. (Currently Amended) The method of claim 1 further comprising ~~the use of distinctly different~~ indicating to the human subject, via the second biofeedback ~~signals~~ signal, ~~indicating~~ [[the]] an exact moment to begin inhalation and indicating to the human subject, via the first biofeedback signal, an [[the]] exact moment to begin exhalation, wherein the indication to begin exhalation is provided by a first feedback type and the indication to begin inhalation is provided by a second feedback type.

4. (Canceled)

5. (Currently Amended) The method of claim [[1]] 3 further comprising ~~the synchronization~~ synchronizing [[of]] the exact moment [[of]] to begin inhalation ~~very precisely~~ with increasing heart rate associated with the detection of the transition in the natural heart rate from the minimum heart rate and synchronizing the exact moment [[of]] to begin exhalation ~~very precisely~~ with decreasing heart rate associated with the detection of the transition in the natural heart rate from the maximum heart rate.

6. (Canceled)

7. (Currently Amended) The method of claim [[1]] 3 ~~further comprising the generation of the biofeedback signal~~ wherein indicating the exact moment to begin inhalation comprises providing the second feedback type on [[of]] the basis of peak negative heart rate and ~~the generation of the biofeedback signal~~ wherein indicating the exact moment to begin exhalation comprises providing the first feedback type on [[of]] the basis of peak positive heart rate.

8. (Canceled)

9. (Currently Amended) The method of claim [[1]] 3 further comprising ~~the generation of the biofeedback signal~~ indicating the exact moment to begin inhalation on the basis of [[the]] peak negative heart rate plus one (1) heart beat and ~~the generation of the biofeedback signal~~ indicating the exact moment to begin exhalation on the basis of peak positive heart rate minus one (1) heart beat.

10. (Canceled)

11. (Currently Amended) The method of claim 1, ~~providing an independently programmable offset for purposes of:~~ wherein:

[[a.]] ~~generating~~ providing the [[a]] first biofeedback signal ~~on detection of the subject's~~ includes providing the first biofeedback signal at the maximum heart rate ~~plus~~ minus a first programmable offset; and

[[b.]] ~~generating~~ providing the [[a]] second biofeedback signal ~~on detection of the subject's~~ includes providing the second biofeedback signal at the ~~minimal~~ minimum heart rate plus a second programmable offset.

12. (Currently Amended) The method of claim 11 wherein the first biofeedback signal informs the human subject to begin to exhale.

13. (Currently Amended) The method of claim 11 wherein the second biofeedback signal informs the human subject to begin to inhale.

14. (Currently Amended) The method of claim 11 wherein the first programmable offset is a percentage of the ~~subject's~~ maximum heart rate of the human subject.

15. (Currently Amended) The method of claim 11 wherein the second programmable offset is a percentage of the ~~subject's~~ minimum heart rate of the human subject.

16. (Canceled)

17. (Currently Amended) The method of claim 11 wherein the ~~said~~ first programmable offset is a ~~defined~~ number of heart beats after the maximum heart rate of the human subject.

18. (Currently Amended) The method of claim 11 wherein the ~~said~~ second programmable offset is a ~~defined~~ number of heart beats after the minimum heart rate of the human subject.

19. (Currently Amended) The ~~system~~ method of claim 11 ~~wherein the control system is further adapted to present to~~ further comprising presenting the human subject with [[the]] a number of heart beats since ~~peak negative~~ the minimum heart rate and a number of heart beats since the ~~peak positive~~ maximum heart [[beat]] rate such that the human subject can consciously synchronize their own inhalation and exhalation on the basis thereof, respectively.

20. (Currently Amended) The method of claim 1 further comprising ~~the presentation of~~ providing individual heart beats to the human subject in at least one of an audible, visual, [[or]] and sensory format.

21. (Canceled)

22. (Currently Amended) The method of claim 1 further comprising ~~the function of~~ providing the first and second biofeedback signals on the basis of ~~peak negative heart rate,~~ at least one of peak positive heart rate [[, or both]] and peak negative heart rate ~~and peak positive heart rate~~.

23. (Canceled)

24. (Currently Amended) The method of claim 1 further comprising ~~the function of alternately synchronizing the~~ instructing the human subject to synchronize a peak of [[the]] an exhalation phase of [[the]] a breathing cycle for the human subject [[-]] ~~the beginning of the inhalation phase of the breathing cycle~~ [[-]] with [[the]] a peak negative heart rate and ~~synchronizing the~~ to synchronize a peak of [[the]] an inhalation phase of the breathing cycle [[-]] ~~the beginning of the exhalation phase of the breathing cycle~~ [[–]] with [[the]] a peak positive heart rate.

25. (Canceled)

26. (Withdrawn) An instructive method for bringing the heart rate variability pattern of the typical untrained subject to an adequate state of coherence such that the present invention may be effectively employed:

a) the instructive method of applying electromyographic measurement techniques for the purpose of realizing adequate coherence of the heart rate variability signal,

b) the instructive method of next applying electroencephalo-graphic measurement techniques for the purpose or realizing adequate coherence of the heart rate variability signal.

27. (Withdrawn) The specific instructive method of claim 26, measuring the electrical potential at the location of the masseter muscle via electromyographic apparatus and instructing the subject to lower said potential while simultaneously monitoring for target coherence of the heart rate variability pattern with the present invention.

28. (Withdrawn) The specific instructive method of claim 26, next measuring the EEG potential in the high beta (26 Hertz) range and instructing the subject to lower said potential

while simultaneously monitoring for target coherence of the heart rate variability pattern with the present invention.

29. (Withdrawn) The specific instructive method of claim 26, next measuring the EEG potential in the beta range (20 Hertz) and instructing the subject to lower said potential while simultaneously monitoring for target coherence of the heart rate variability pattern with the present invention.

30. (New) A system for consciously synchronizing a breathing cycle of a human subject with a natural heart rate cycle of the human subject, the system comprising:

a pulse sensor adapted to produce a pulse output signal;

a pulse monitor adapted to monitor the natural heart rate of the human subject using the pulse output signal;

a positive and negative peak rate detector adapted to:

detect a transition in the monitored natural heart rate from a maximum heart rate; and

detect a transition in the monitored natural heart rate from a minimum heart rate; and

a criteria settings and comparator control system adapted to:

provide a first biofeedback signal to the human subject to indicate that the natural heart rate has reached the maximum heart rate; and

provide a second biofeedback signal to the human subject to indicate that the natural heart rate has reached the minimum heart rate.

31. (New) The system of claim 30 wherein the criteria settings and comparator control system is further adapted to indicate, via the second biofeedback signal, an exact moment to begin inhalation and to indicate, via the first biofeedback signal, an exact moment to begin exhalation, and comprising a stimulus generator adapted to provide a first feedback type in response to the indication of the exact moment to begin exhalation and to provide a second feedback type in response to the indication of the exact moment to begin inhalation.

32. (New) The system of claim 31 wherein the criteria settings and comparator control system is further adapted to synchronize the exact moment to begin inhalation with increasing heart rate associated with the detection of the transition in the monitored natural heart rate from the minimum heart rate and to synchronize the exact moment to begin exhalation with decreasing heart rate associated with the detection of the transition in the monitored natural heart rate from the maximum heart rate.

33. (New) The system of claim 31 wherein the criteria settings and comparator control system is further adapted to indicate the exact moment to begin inhalation on the basis of peak negative heart rate and to indicate the exact moment to begin exhalation of the basis of peak positive heart rate.

34. (New) The system of claim 31 wherein the criteria settings and comparator control system is further adapted to indicate the exact moment to begin inhalation on the basis of the peak negative heart rate plus one (1) heart beat and indicate the exact moment to begin exhalation on the basis of peak positive heart rate minus one (1) heart beat.

35. (New) The system of claim 30, wherein the criteria settings and comparator control system is further adapted to:

provide the first biofeedback signal at the maximum heart rate minus a first programmable offset; and

provide the second biofeedback signal at the minimum heart rate plus a second programmable offset.

36. (New) The method of claim 35, wherein the criteria settings and comparator control system is further adapted to instruct the human subject to begin to exhale in response to the first biofeedback signal.

37. (New) The method of claim 35, wherein the criteria settings and comparator control system is further adapted to instruct the human subject to begin to inhale in response to the second biofeedback signal.

38. (New) The system of claim 35 wherein the criteria settings and comparator control system is adapted to provide the first programmable offset as a percentage of the maximum heart rate of the human subject.

39. (New) The system of claim 35 wherein the criteria settings and comparator control system is adapted to provide the second programmable offset as a percentage of the minimum heart rate of the human subject.

40. (New) The system of claim 35 wherein the criteria settings and comparator control system is adapted to provide the first programmable offset as a number of heart beats after the maximum heart rate of the human subject.

41. (New) The system of claim 35 wherein the criteria settings and comparator control system is adapted to provide the second programmable offset as a number of heart beats after the minimum heart rate of the human subject.

42. (New) The system of claim 35 wherein the criteria settings and comparator control system is adapted to present the human subject with a number of heart beats since the minimum heart rate and a number of heart beats since the maximum heart rate such that the human subject can consciously synchronize their own inhalation and exhalation on the basis thereof, respectively.

43. (New) The system of claim 30 comprising a stimulus generator adapted to provide at least one of audible, visual, and sensory outputs, and wherein the criteria settings and comparator control system is further adapted to receive indications of individual heartbeats from the pulse monitor and to provide the indications of the individual heart beats to the human subject via at least one of the audible, visual, and sensory outputs of the stimulus generator.

44. (New) The system of claim 30 wherein the criteria settings and comparator control system is further adapted to provide the first and second biofeedback signals on the basis of at least one of peak positive heart rate and peak negative heart rate.

45. (New) The system of claim 30 wherein the criteria settings and comparator control system is further adapted to instruct the human subject to synchronize a peak of an exhalation phase of the breathing cycle for the human subject with the peak negative heart rate and to synchronize a peak of an inhalation phase of the breathing cycle with the peak positive heart rate.